

California Data Exchange Center (CDEC) and Flood Emergency Response Information Exchange (FERIX)

June 2017

An aerial photograph of a wide, muddy river. On the left side, there is a concrete dam structure. In the middle of the river, a small boat is visible. The surrounding landscape is a mix of green fields and brown, leafless trees, suggesting a late autumn or winter setting. The sky is overcast and grey.

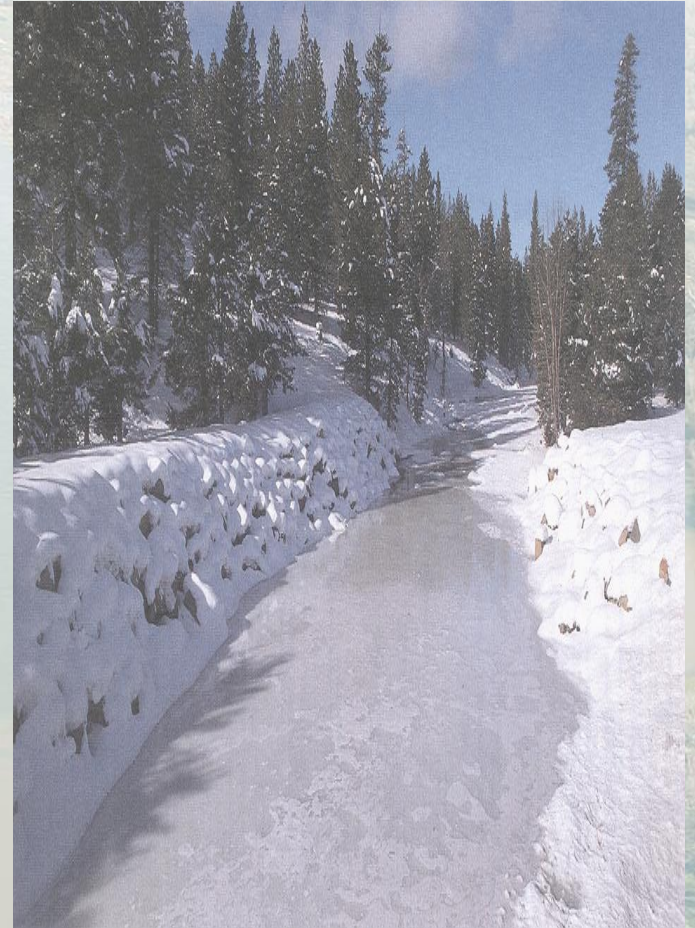
David Parker

Senior Programmer Supervisor

- Dept of Water Resources
- Division of Flood Management
- Hydrology and Flood Operations
- California Data Exchange Center (CDEC)

CDEC Objectives

- Collect and disseminate hydrologic and weather information
- Provide a centralized database for user access
- Provide application development to support operations



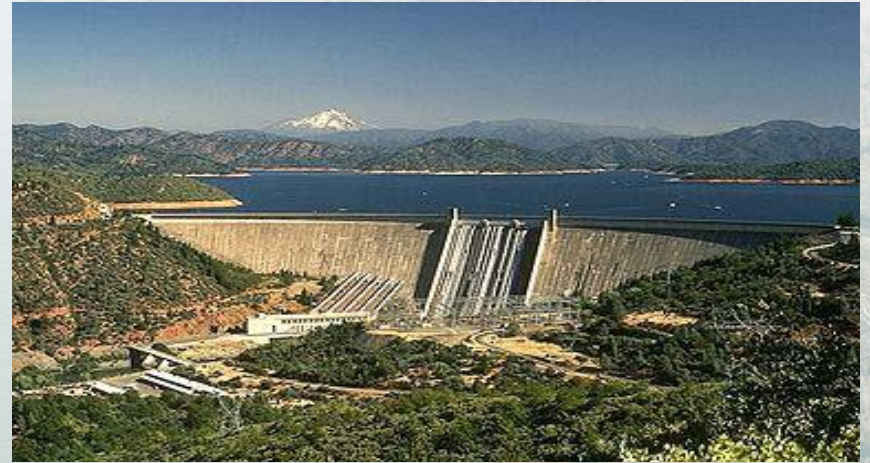
Primary Uses of CDEC Database

- Early flood warning system
- Monitoring river levels
- Planning reservoir releases
- Information source during high water events
- Monitor water quality in the Delta

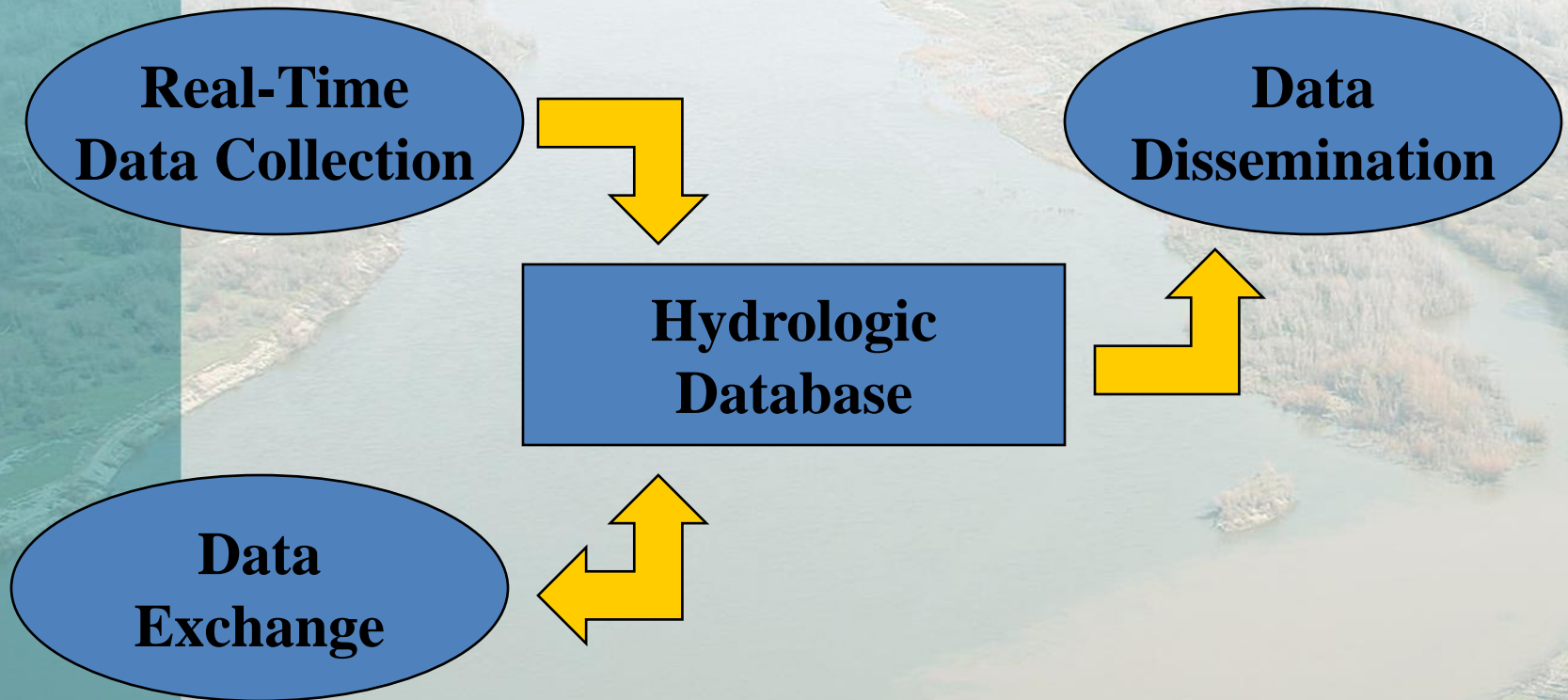


Primary Uses of CDEC Database

- Water supply forecasting
- Reservoir operations
- Water management and power generation in support of SWP
- Recreational use of water ways



Essential Functions



Real-Time Data Collection

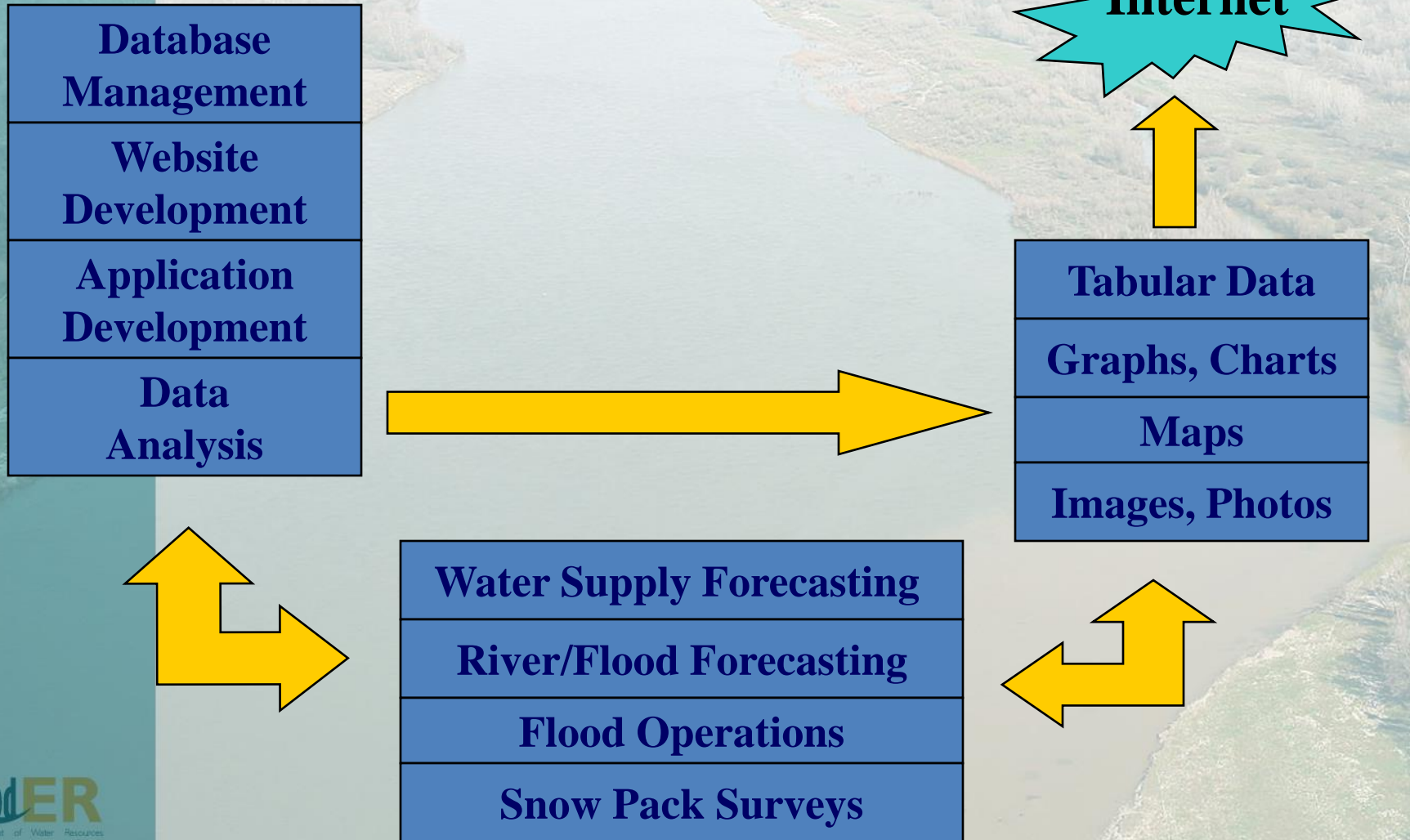
- Remote data stations
- Satellite transmission (1,108 stations)



Data Exchange

- Electronic transfer of information between Federal, State and public agencies including National Weather Service, US Bureau of Reclamation, US Army Corps of Engineers
- Data from 567 stations are received and stored in centralized database
- Other information includes summary reports and real-time images

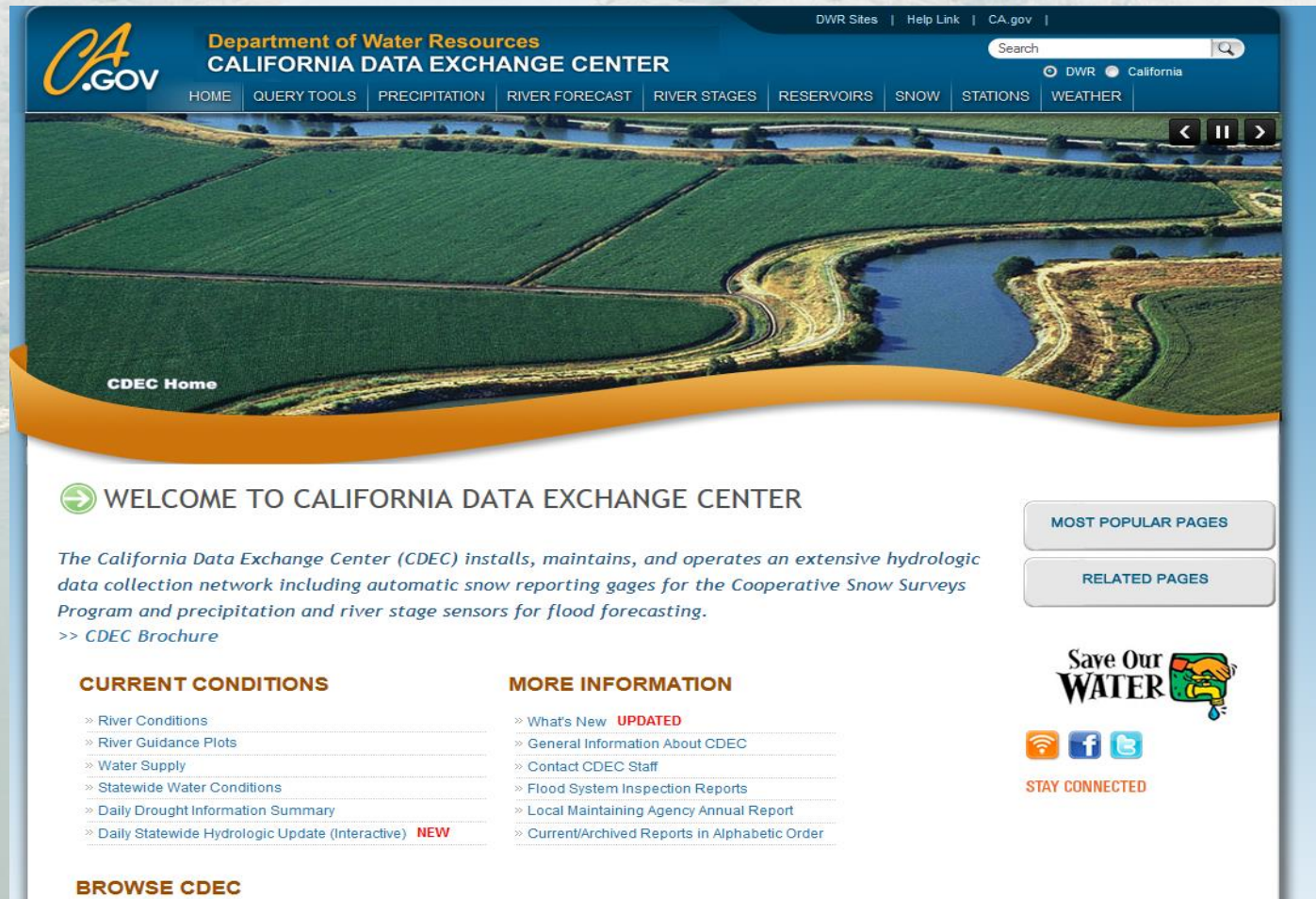
Data Dissemination



Website Access

- Public website: <http://cdec.water.ca.gov>
- CDEC webmaster e-mail: flood.webmaster@water.ca.gov

CDEC Home Page



The screenshot shows the homepage of the California Data Exchange Center (CDEC). The header features the CA.GOV logo, the Department of Water Resources logo, and the CDEC name. A navigation menu includes links for HOME, QUERY TOOLS, PRECIPITATION, RIVER FORECAST, RIVER STAGES, RESERVOIRS, SNOW, STATIONS, and WEATHER. A search bar and location selector (DWR, California) are also present. The main content area has a large image of a river and fields with a 'CDEC Home' label. Below this, there is a 'WELCOME TO CALIFORNIA DATA EXCHANGE CENTER' section with a brief description of CDEC's mission and a link to the CDEC Brochure. To the right, there are buttons for 'MOST POPULAR PAGES' and 'RELATED PAGES'. Further down, there are two columns of links: 'CURRENT CONDITIONS' and 'MORE INFORMATION'. At the bottom right, there is a 'Save Our WATER' logo and social media icons for Wi-Fi, Facebook, and Twitter, with the text 'STAY CONNECTED' below them.

CA.GOV Department of Water Resources CALIFORNIA DATA EXCHANGE CENTER

DWR Sites | Help Link | CA.gov | Search

HOME QUERY TOOLS PRECIPITATION RIVER FORECAST RIVER STAGES RESERVOIRS SNOW STATIONS WEATHER

CDEC Home

WELCOME TO CALIFORNIA DATA EXCHANGE CENTER

The California Data Exchange Center (CDEC) installs, maintains, and operates an extensive hydrologic data collection network including automatic snow reporting gages for the Cooperative Snow Surveys Program and precipitation and river stage sensors for flood forecasting.

>> CDEC Brochure

CURRENT CONDITIONS

- » River Conditions
- » River Guidance Plots
- » Water Supply
- » Statewide Water Conditions
- » Daily Drought Information Summary
- » Daily Statewide Hydrologic Update (Interactive) **NEW**

MORE INFORMATION

- » What's New **UPDATED**
- » General Information About CDEC
- » Contact CDEC Staff
- » Flood System Inspection Reports
- » Local Maintaining Agency Annual Report
- » Current/Archived Reports in Alphabetic Order

BROWSE CDEC

MOST POPULAR PAGES

RELATED PAGES

Save Our WATER

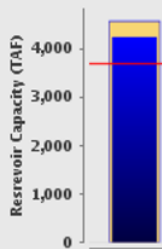
STAY CONNECTED

Reservoir Conditions

Reservoir Conditions - Lake Shasta

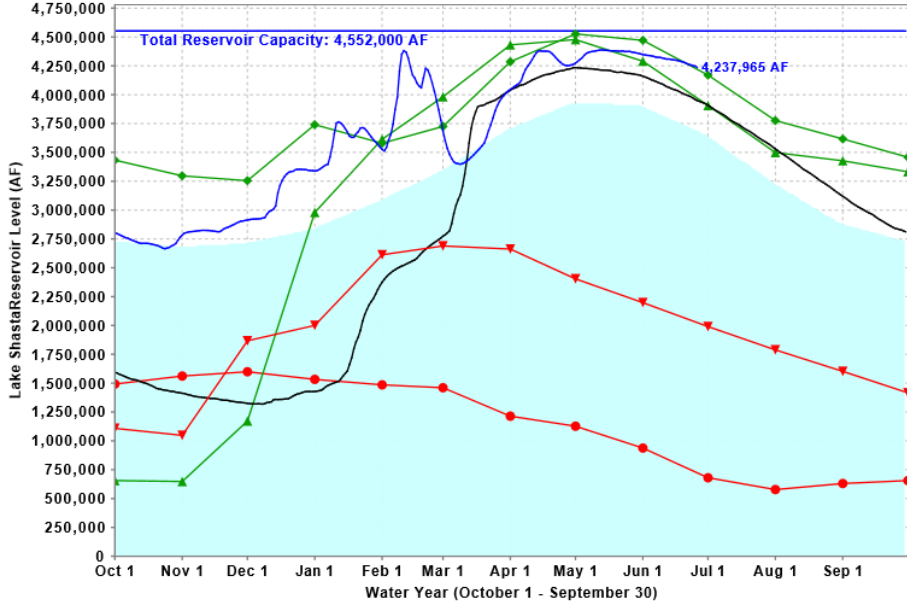


Lake Shasta
Conditions
(as of Midnight - June 26, 2017)



Current Level: 4,237,965 AF
93% (Total Capacity) | 115% (Historical Avg.)

Lake Shasta Levels: Various Past Water Years and Current Water Year, Ending At Midnight June 26, 2017



■ Historical Average
 — Total Reservoir Capacity
 ● 1976-1977 (Driest)
 ▲ 1977-1978
 ▲ 1982-1983 (Wettest)
 — 2015-2016
 ▼ 2014-2015
 — Current: 2016-2017

Data Updated 06/27/2017 11:15 AM

Purpose of FERIX

The purpose FERIX is to compile integrate, and exchange flood information and make it easily available to the agencies responsible for flood management in California.

The integrated system includes:

- Real-time hydrologic data and climate information
- Weather and hydrologic forecast data
- Documentation of the Central Valley flood system

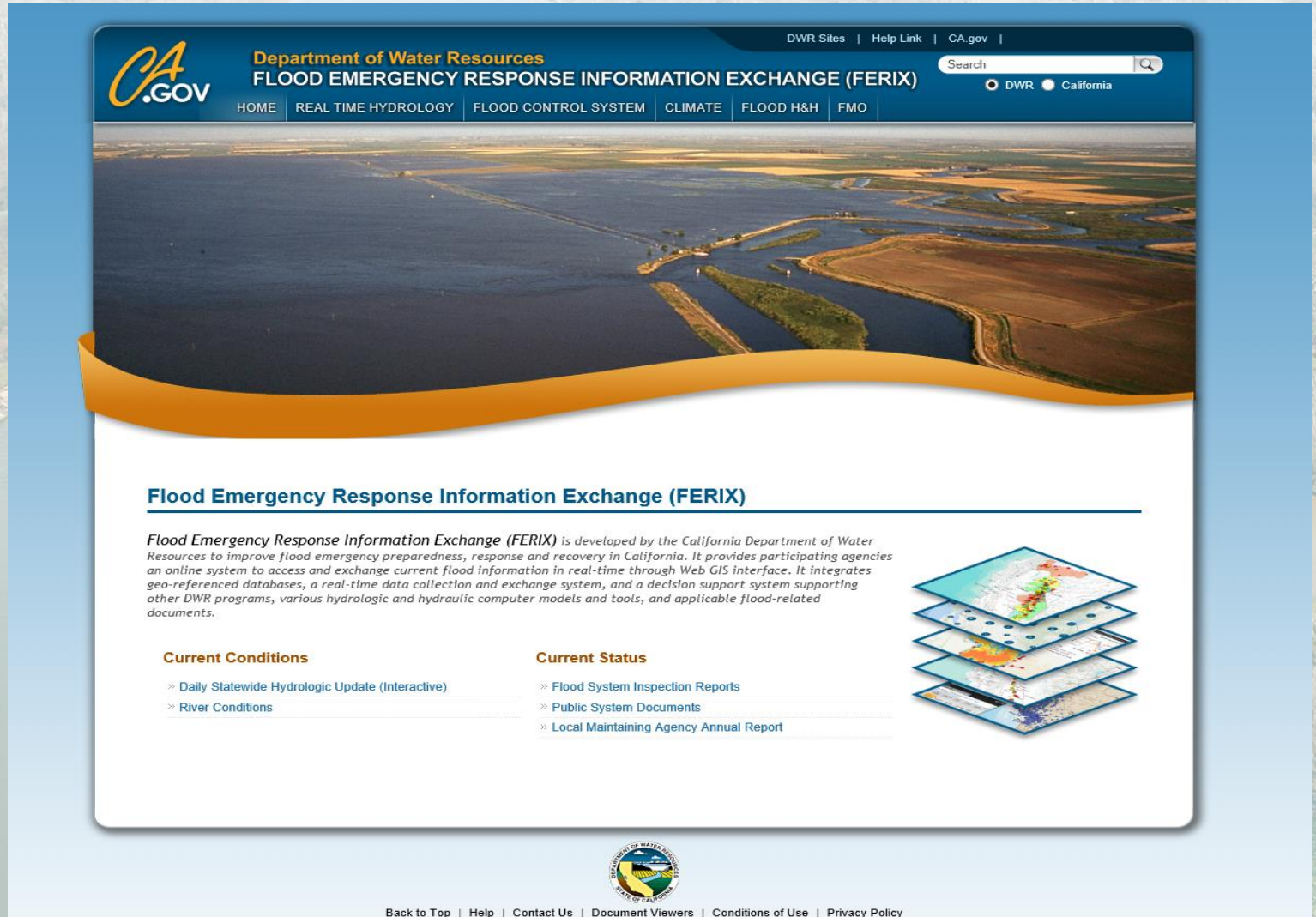
Also includes:

- Levee status information from Local Maintaining Agencies
- Flood system inspection reporting
- Flood Operations Center incident reporting

The integrated system features:

- A geo-reference database of flood, hydrology, and climate information
- A web-based user interface for easy access
- A data exchange process for data sharing

FERIX Home Page



The screenshot shows the FERIX Home Page. At the top, there is a navigation bar with the CA.GOV logo, the Department of Water Resources name, and the title 'FLOOD EMERGENCY RESPONSE INFORMATION EXCHANGE (FERIX)'. The navigation bar includes links for HOME, REAL TIME HYDROLOGY, FLOOD CONTROL SYSTEM, CLIMATE, FLOOD H&H, and FMO. A search bar is located on the right side of the navigation bar. Below the navigation bar is a large aerial photograph of a flood control system. A blue banner with a white wavy border is positioned below the photograph. The main content area features a section titled 'Flood Emergency Response Information Exchange (FERIX)' with a description of the system. To the right of the description is an illustration of a multi-layered GIS interface. Below the description are two columns of links: 'Current Conditions' and 'Current Status'. The footer contains the 'floodER' logo, the Department of Water Resources logo, and a list of links: Back to Top, Help, Contact Us, Document Viewers, Conditions of Use, and Privacy Policy.

CA.GOV Department of Water Resources
FLOOD EMERGENCY RESPONSE INFORMATION EXCHANGE (FERIX)

HOME | REAL TIME HYDROLOGY | FLOOD CONTROL SYSTEM | CLIMATE | FLOOD H&H | FMO

Search [] DWR California

Flood Emergency Response Information Exchange (FERIX)

Flood Emergency Response Information Exchange (FERIX) is developed by the California Department of Water Resources to improve flood emergency preparedness, response and recovery in California. It provides participating agencies an online system to access and exchange current flood information in real-time through Web GIS interface. It integrates geo-referenced databases, a real-time data collection and exchange system, and a decision support system supporting other DWR programs, various hydrologic and hydraulic computer models and tools, and applicable flood-related documents.

Current Conditions

- » [Daily Statewide Hydrologic Update \(Interactive\)](#)
- » [River Conditions](#)

Current Status

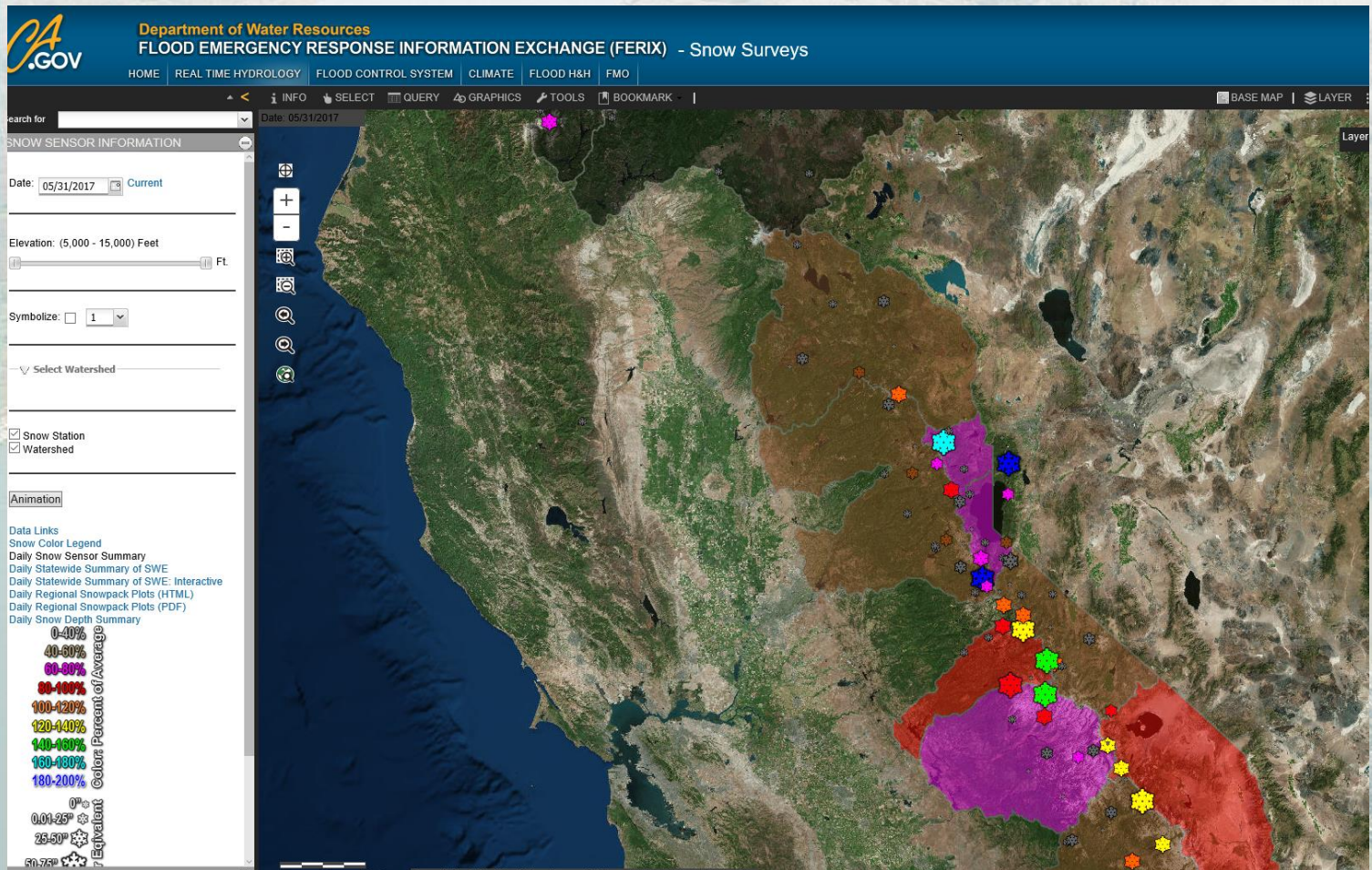
- » [Flood System Inspection Reports](#)
- » [Public System Documents](#)
- » [Local Maintaining Agency Annual Report](#)

floodER
Department of Water Resources
Flood Emergency Response Program

Department of Water Resources
STATE OF CALIFORNIA

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Snow Water Content



Levee Vulnerabilities

CA
DWR Sites | Help Link | CA.gov |

.GOV
Department of Water Resources
FLOOD EMERGENCY RESPONSE INFORMATION EXCHANGE (FERIX) - Levee Vulnerabilities

HOME REAL TIME HYDROLOGY FLOOD CONTROL SYSTEM CLIMATE FLOOD H&H FMO
SEARCH

LEVEE VULNERABILITIES

142-23

Location Start: undefined **Location End:**

Failure Type: Stability

Category: Serious - The site may fail in the next one or two high-water events. If not repaired, it may turn critical.

Description: Table 10. Levee subsidence, instability and bank erosion - 2003. Part 1 Subsidence and slope instability. Status: active - recurrence at same location.


Location

Start Latitude:	38.477877664	Start Longitude:	-121.580723124
End Latitude:	38.479326803	End Longitude:	-121.580816173
Waterway:	Deep Water Shipping Channel	Maintaining Agency:	Netherlands
Unit Name:	Unit No. 01 Yolo Bypass	Data Source:	NULE
Leveed Area:	RD 302, RD 999 & Clarksburg	Date Reported:	11/1/2004
Bank:	Left	Side:	Crown

2016

Field Date: 2016-08-17 00:00:00.0 **Field Team:** sa, jdl

Field Comments: In one year, the new AC patch observed last year has completely failed due to slope/roadway settlement. Primarily in the N bound lane, we observed open cracking (2-4") with 1-2" vertical displacement. In some open crack, the successive annual layers of AC patch are visible. AC thickness in some areas is greater than 10".



Enlarge Image

2015

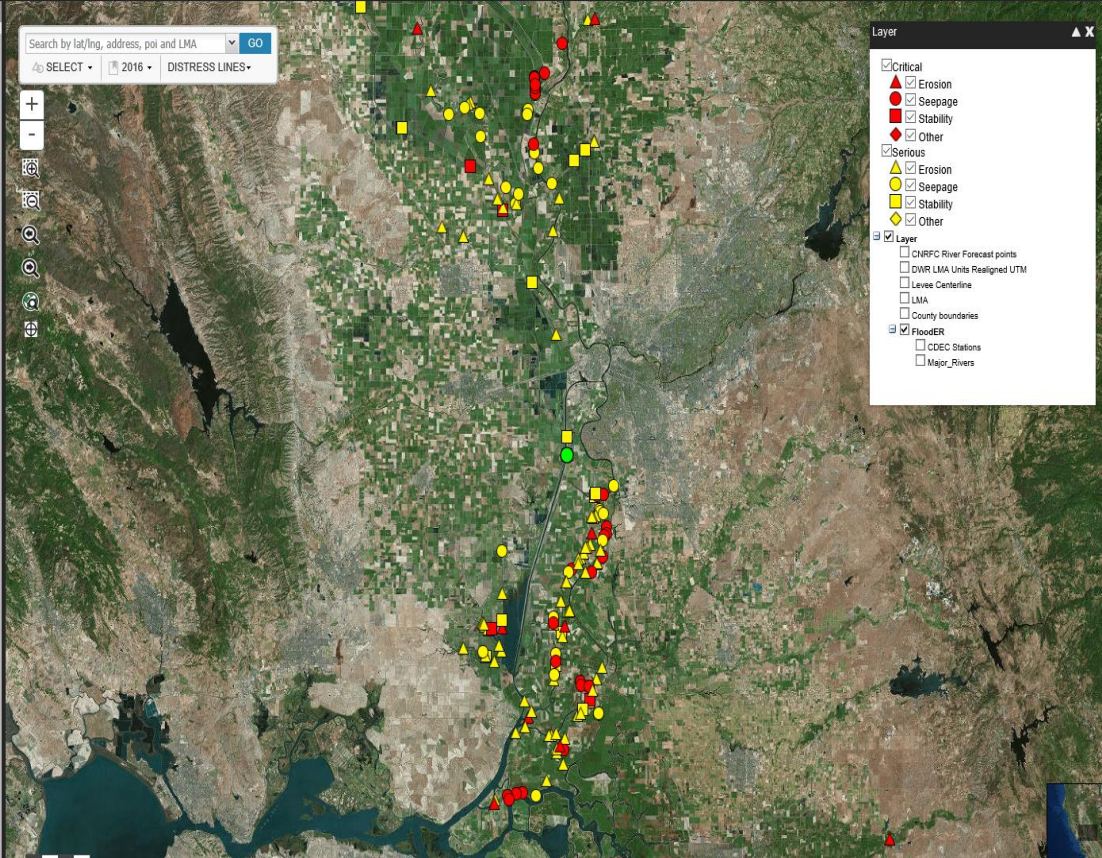
2014

2013

2012


Search by lat/long, address, poi and LMA

SELECT 2016 DISTRESS LINES-



Layer

- Critical
 - Erosion
 - Seepage
 - Stability
 - Other
- Serious
 - Erosion
 - Seepage
 - Stability
 - Other
- Layer
 - CHRFC River Forecast points
 - DWR LMA Units Reassigned UTM
 - Levee Centerline
 - LMA
 - County boundaries
 - FloodER
 - CDEC Stations
 - Major Rivers



Department of Water Resources
Flood Emergency Response Program

CDEC Staffing

- Seven programmers for application development, data management, and system administration
- One GIS specialist for geo-spatial database management and GIS application development
- Annual budget: \$1,800,000